federal register

WEDNESDAY, AUGUST 22, 1973

Volume 38 ■ Number 162

PART II

ENVIRONMENTAL PROTECTION AGENCY

■

EFFLUENT LIMITATION GUIDELINES AND STANDARDS

Insulation Fiberglass Manufacturing, and Beet Sugar Processing Industries

ENVIRONMENTAL PROTECTION AGENCY

[40 CFR Parts 401, 426]

GLASS MANUFACTURING POINT SOURCE CATEGORY; INSULATION FIBERGLASS MANUFACTURING SUBCATEGORY

Proposed Effluent Limitations Guidelines for Existing Sources and Standards of Performance and Pretreatment Standards for New Sources

Notice is hereby given that effluent limitations guidelines for existing sources and, standards of performance and pretreatment standards for new sources set forth in tentative form below are proposed by Environmental Protection Agency ("EPA") for the insulation fiberglass manufacturing subcategory pursuant to sections 304(b), 306(b) and 307(c) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1314, 1316(b) and 1317(c), 86 Stat. 816 et seq.; P.L. 92-500) (the "Act"). Insulation fiberglass manufacturing is a subcategory of the glass manufacturing category of point sources. In addition to the specific proposed regulations concerning the insulation fiberglass subcategory, proposed regulations are set forth below providing generally applicable definitions and describing the legal authorities for all regulations subsequently to be issued under Parts 402 to 699, 40 CFR concerning effluent limitations guidelines, standards of performance and pretreatment standards for new sources pursuant to sections 304(b), 306 and 307(c) of the Act.

1. *Legal Authority.* a. *Existing point sources.* Section 301(b) of the Act requires the achievement by not later than July 1, 1977, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of the Act. Section 301(b) also requires the achievement by not later than July 1, 1983, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of best available technology economically achievable which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b) of the Act.

Section 304(b) of the Act requires the Administrator to publish regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the application of the best practicable control technology currently available and the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods and other alternatives. The regulations proposed herein set forth effluent limitations guidelines, pursuant to section 304(b) of the Act, for the insulation fiberglass manufacturing subcategory of the glass manufacturing point source category.

b. *New sources.* Section 306 of the Act requires the achievement by new sources of a Federal standard of performance providing for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

Section 306(b)(1)(A) of the Act requires the Administrator to propose regulations establishing Federal standards of performances for categories of new sources included in a list published pursuant to section 306(b)(1)(A) of the Act. The Administrator published in the FEDERAL REGISTER of January 16, 1973 (38 FR 1624) a list of 27 source categories, including the glass manufacturing source category. The regulations proposed herein set forth the standards of performance applicable to new sources within the insulation fiberglass manufacturing subcategory of the glass manufacturing source category.

Section 307(c) of the Act requires the Administrator to promulgate pretreatment standards for new sources at the same time that standards of performance for new sources are promulgated pursuant to section 306. Section 426.15 proposed below provides pretreatment standards for new sources within the insulation fiberglass subcategory.

Section 304(c) of the Act requires the Administrator to issue to the States and appropriate water pollution control agencies information on the processes, procedures or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under Section 306 of the Act. The report referred to below provides, pursuant to section 304(c) of the Act, preliminary information on such processes, procedures or operating methods.

2. Summary and basis of proposed effluent limitations guidelines, standards of performance and pretreatment standards for new sources.

a. *General methodology.* The effluent limitations guidelines and standards of performance proposed herein were developed in the following manner. The point source category was first studied for the purpose of determining whether separate limitations and standards are appropriate for different segments within the category. This analysis included a determination of whether differences in raw material used, product produced, manufacturing process employed, age, size, waste water constituents and other factors require development of separate limitations and standards for different segments of the point source category. The raw waste characteristics for each such segment were then identified. This included an analysis of (1) the source, flow and volume of water used in the process employed and the sources of waste and waste waters in the plant and (2) the constituents of all waste water. The constituents of the waste waters which should be subject to effluent limitations guidelines and standards of performance were identified.

Next, the control and treatment technologies existing within each segment were identified. This included an identification of each distinct control and treatment technology, including both in-plant and end-of-process technologies, which are existent or capable of being designed for each segment. It also included an identification of, in terms of the amount of constituents and the chemical, physical, and biological characteristics of pollutants, the effluent level resulting from the application of each of the technologies. The problems, limitations and reliability of each treatment and control technology were also identified. In addition, the non-water quality environmental impact was identified, such as the effects of the application of such technologies upon other pollution problems, including air, solid waste, noise and radiation. The energy requirements of each control and treatment technology were determined as well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology constitute the "best practicable control technology currently available," the "best available technology economically achievable" and the "best available demonstrated control technology, processes, operating methods, or other alternatives." In identifying such technologies, various factors were considered. These included the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors.

The data on which the above analysis was performed included EPA permit applications, EPA sampling and inspections, consultant reports, and industry submissions.

The pretreatment standards proposed herein are intended to be complementary to the pretreatment standard proposed for existing sources under Part 128 of 40 CFR. The basis for such standards are set forth in the FEDERAL REGISTER of July 19, 1973, 38 FR 19236. The provisions of Part 128 are equally applicable to sources which would constitute "new sources," under section 306 if they were to discharge pollutants directly to navigable waters except for section 128.133. That section provides a pretreatment standard for "incompatible pollutants" which requires the application

of the "best practicable control technology currently available," subject to an adjustment for amounts of pollutants removed by the publicly owned treatment works. Since the pretreatment standards proposed herein apply to new sources, Section 426.15 below amends § 128.133 to require application of the standard of performance for new sources rather than the "best practicable" standard applicable to existing sources under sections 301 and 304(b) of the Act.

b. *Summary of conclusions with respect to insulation fiberglass manufacturing subcategory.* A draft report entitled the "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards—Insulation Fiberglass Manufacturing Segment of the Glass Manufacturing Point Source Category" which details the analysis undertaken in support of the regulations being proposed herein is available for inspection in the EPA Information Center, Room 227, West Tower, Waterside Mall, Washington, D.C.; at all EPA regional offices; and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the proposed regulations is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed regulations, or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman.

The following summarizes the principal conclusions of the above listed draft report.

The insulation fiberglass manufacturing segment of the glass manufacturing industry serves as a single subcategory for the purpose of establishing effluent limitations guidelines and standards of performance. Factors such as age, size of plant, process employed, waste water constituents and waste control technologies substantiate this determination.

The known significant pollutants, characteristics or properties of waste waters resulting from the insulation fiberglass manufacturing process include phenols, biochemical oxygen demand, chemical oxygen demand, dissolved solids, suspended solids, oil and grease, ammonia, pH, color, turbidity, and heat.

Because of the large amounts of water required in the manufacturing process, the insulation fiberglass industry has employed recirculation systems. Historically, highly caustic chain wash water, the primary source of pollutants, was difficult to recirculate and treat. Technological changes and improvements allowed the change from a caustic chain wash solution to a high pressure spray chain wash. Waste chain wash waters could then be filtered or similarly treated and reused as chain wash water. Because of the accumulation of solids, however, a blowdown from this system was necessary. Biological treatment of the blowdown from these recirculation systems has at one plant achieved in excess of 90 percent removal of phenol, suspended solids, chemical oxygen demand and biochemical oxygen demand. Despite the high removal efficiencies, however, high concentrations of phenol, chemical oxygen demand and color were still present in the effluent.

Additional tertiary treatment of effluent from the process described above by carbon adsorption was investigated. It was found that the costs of such treatment exceeded that for a total recirculation system in which the process water blowdown is reused in the process as binder dilution water or overspray. The total recirculation system eliminates pollutants in the blowdown by fixing them in the product when the water evaporates in the curing ovens.

The non-water quality environmental impacts from total recirculation systems consist of increased sludges resulting from increased waste water treatment and increased noise levels due to the addition of high energy pumps. Technology exists to properly dispose of the solid wastes, and the small incremental increase in noise due to high energy pumps does not affect the hearing protection measures already practiced in the high level noise areas of an insulation fiberglass plant. The industry will require an additional 38.6 million kilowatt hours of power annually to operate recycling systems. This is less than a 5 percent increase relative to estimated current industry power requirements for furnaces and processing equipment. The solid waste generated by total recirculation is no greater than if alternate waste water treatment technologies were applied.

The total capital investment for the industry to achieve no discharge of process waste water pollutants is estimated to be less than $7,000,000. These costs could increase the capital investment for a given plant by 1.2 to 3.8 percent. Annual operating costs are estimated at $3,700,000 for the industry, increasing the manufacturing costs for a given plant by 0.6 to 3.8 percent relative to selling price. Smaller plants will pay more per unit of production than large plants. However, the economic viability of any plant in the industry is not threatened.

Total recirculation of process waste water is being successfully accomplished at 6 of the total of 19 plants in the industry. The study of the insulation fiberglass subcategory of point sources concluded that the best practicable technology currently available for this category of sources is total recirculation of process waste waters. The degree of effluent reduction attainable through the application of this technology is no discharge of process waste water pollutants to navigable waters.

3. *Summary of Public Participation.* Prior to this publication, the agencies and groups listed below were consulted and given an opportunity to participate in the development of the effluent limitations guidelines and standards of performance for the insulation fiberglass manufacturing subcategory. The draft report on insulation fiberglass manufacturing referred to above includes, as a supplement, a description of consultations and other participation by the public which has taken place and the nature and disposition of the comments received. The following are the principal agencies and groups consulted: Effluent Standards and Water Quality Information Advisory Committee (established under section 515 of the Act); All State and U.S. Territory Pollution Control Agencies; Ohio River Valley Sanitation Commission; New England Interstate Water Pollution Control Commission; Delaware River Basin Commission; Hudson River Sloop Restoration, Inc.; Conservation Foundation; Businessmen for the Public Interest; Environmental Defense Fund, Inc.; Natural Resources Defense Council; The American Society of Civil Engineers; Water Pollution Control Federation; National Wildlife Federation; The American Society of Mechanical Engineers; U.S. Department of Commerce; Water Resources Council; U.S. Department of the Interior; Certain-Teed Products Corporation; Johns-Manville Corporation; and Owens-Corning Fiberglas Corporation.

The primary issues raised in the development of the proposed effluent limitations guidelines and standards of performance and the treatment of these issues herein are as follows:

1. The Effluent Standards and Water Quality Information Advisory Committee questioned whether it is appropriate to establish 1985 standards (no discharge of pollutants national goal) by 1977. EPA has reached the conclusion that in the case of the insulation fiberglass subcategory, the best practicable control technology currently available constitutes total recirculation of process waste waters. In section 101(a)(2) of the Federal Water Pollution Control Act Amendments of 1972, Congress established as a national goal the elimination of the discharge of pollutants into navigable waters by 1985. However, Congress also set requirements for technology based standards in sections 301, 304(b) and 306 which require the maximum degree of reduction of pollutant discharges prior to 1985, which is consistent with the technical and economic factors to be taken into account under sections 304(b) and 306 of the Act (notably, standards are to be set for 1977 and 1983 compliance, but no regulations are to be promulgated for 1985). Currently 6 of 19 plants achieve no discharge of process waste water pollutants. It has been determined that this technology costs less than equivalent or nearly equivalent end-of-process treatment technologies. The Agency will require the effluent reduction attainable

by the best practicable control technology when establishing regulations under section 304(b) of the Act, whether that reduction is down to "no discharge" or to some greater degree of permitted discharge. For the insulation fiberglass subcategory, the degree of effluent reduction attainable through the application of the best practicable control technology currently available is no discharge of process waste waters pollutants.

2. The Effluent Standards and Water Quality Information Advisory Committee also questioned whether disposal of blowdown on the hot fiberglass would increase air emissions because of the presence of volatile matter. The binder solution, which contains orders of magnitude more of the same volatile matter, is applied at the same time as the blowdown. No measurable increase in air emissions has been noted. The blowdown will not affect emission control devices used to control binder volatilization.

3. Industry was concerned that regulations requiring no discharge of process waste water pollutants would be applied to insulation plants where some textile products are also made. Insulation fiberglass is a separate subcategory from textile fiberglass. The regulations proposed herein apply only to the insulation fiberglass manufacturing subcategory.

4. The State of Nebraska expressed concern that ground water contamination could result from infiltration where evaporation ponds are used. The proposed limitations and standards can be achieved without use of evaporation or seepage ponds.

5. Some industry representatives requested that noncontact cooling waters be omitted from the no discharge requirements. The regulations call for no discharge of process waste water pollutants, not waters. If the industry can treat waste waters, such as to remove all process waste water pollutants, a discharge will be permitted. Existing exemplary facilities incorporate noncontact cooling waters into the total recirculation systems, demonstrating its feasibility. Six plants presently achieve no discharge of process waste water pollutants, including noncontact cooling water and in EPA's judgment, elimination of such discharge is within the scope of the best practicable control technology currently available.

6. Industry requested that provisions be allowed for emergency discharges during system upsets. Due to the nature of the waste waters, discharge of untreated waste waters cannot be allowed.

7. Industry requested that boiler blowdown and water softening backwash be omitted from the no discharge of pollutants requirement. It is not technologically feasible to totally recycle these nonprocess waste waters in all cases because of chemical interference problems with the phenolic resin. Therefore, EPA has excluded boiler blowdown and water softening backwash from the requirement of no discharge. Plants in this industy currently discharge these wastes to publicly owned treatment works and no reported treatability problems have been encountered. Boiler blowdown and water softening backwash will be covered under the categories of steam supply and water supply respectively.

Interested persons may participate in this rulemaking by submitting written comments in triplicate to the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460. Attention: Mr. Philip B. Wisman. Comments on all aspects of the proposed regulations are solicited. All comments received not later than September 21, 1973, will be considered.

Dated August 15, 1973.

JOHN QUARLES,
Acting Administrator.

Part 401 is proposed to read as follows:

PART 401—GENERAL PROVISIONS

Sec.
401.10 Scope and purpose.
401.11 General definition.
401.12 Law authorizing establishment of effluent limitations guidelines, standards of performance and pretreatment standards for new sources.
401.13 Test procedures for measurement.

§ 401.10 Scope and purpose.

Regulations promulgated under Parts 402 to 699 of this subchapter prescribe guidances for effluent limitations, standards of performance for new sources and pretreatment standards for new sources pursuant to sections 301, 304(b), 306 and 307(c) of the Federal Water Pollution Control Act, as amended, ("the Act", 33 U.S.C. 1251, 1311, 1314(b), 1316 and 1317 (c); 86 Stat. 816; Pub. L. 92–500). Point sources of discharges of pollutants are required to comply with these regulations, where applicable, and permits issued by States or the Environmental Protection Agency ("EPA") pursuant to section 402 of the Act must be conditioned upon under the National Pollutant Discharge Elimination System ("NPDES") established pursuant to section 402 of the Act must be conditioned upon compliance with applicable requirements of section 301 and 306 (as well as certain other requirements). This Part 401 sets forth the legal authority and general definitions which will apply to all regulations issued concerning specific classes and categories of point sources under Parts 402 through 699 which follow. In certain instances the regulations applicable to a particular source category will contain more specialized definitions. In the case of any conflict between regulations issued under this Part 401 and regulations issued under Parts 402 through 699, the latter more specific regulations will prevail.

§ 401.11 General definitions.

For the purposes of Parts 402 through 699:

(a) The term "Act" means the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq., 86 Stat. 816, P.L. 92–500.

(b) The term "Administrator" means the Administrator of the United States Environmental Protection Agency.

(c) The term "Environmental Protection Agency" means the United States Environmental Protection Agency.

(d) The term "point source" means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged.

(e) The term "new source" means any building, structure, facility or installation from which there is or may be the discharge of pollutants, the construction of which is commenced after the publication of proposed regulations prescribing a standard of performance under Section 306 of the Act which will be applicable to such source if such standard is thereafter promulgated in accordance with section 306 of the Act.

(f) The term "pollutant" means dredged spoil, solid waste, incinerated residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water. It does not mean (1) sewage from vessels or (2) water, gas or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well, used either to facilitate production or for disposal purposes, is approved by authority of the State in which the well is located, and if such State determines that such injection or disposal will not result in degradation of ground or surface water resources.

(g) The term "pollution" means the man made or man induced alteration of the chemical, physical, biological and radiological integrity of water.

(h) The term "discharge of a pollutant" and the term "discharge of pollutants" each means (1) any addition of any pollutant to navigable waters from any point source and (2) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source, other than from a vessel or other floating craft. The term "discharge's includes a discharge of a pollutant and a discharge of pollutants.

(i) The term "effluent limitation" means any restriction established by the Administrator on quantities, rates, and concentrations of chemical, physical, biological and other constituents which are discharged from point sources, other than new sources, into navigable waters, the waters of the contiguous zone, or the ocean. The term "effluent limitations guidelines" means a regulation issued by the Administrator pursuant to section 304(b) of the Act.

(j) The term "standard of performance" means any restriction established

by the Administrator pursuant to section 306 of the Act on quantities, rates, and concentrations of chemical, physical, biological and other constituents which are or may be discharged from new sources into navigable waters, the waters of the contiguous zone or the ocean.

(k) The term "navigable waters" includes: all navigable waters of the United States; tributaries of navigable waters of the United States; interstate waters; intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce; and intrastate lakes, rivers, and streams which are utilized for industrial purposes by industries in interstate commerce.

(l) The terms "state water pollution control agency", "interstate agency", "State," "municipality," "person," "territorial seas," "contiguous zone," "biological monitoring," "schedule of compliance," and "industrial user," shall be defined in accordance with section 502 of the Act unless the context otherwise requires.

§ 401.12 Law authorizing effluent limitations guidelines, standards of performance and pretreatment standards for new sources.

(a) Section 301(a) of the Act provides that "except as in compliance with this section and sections 302, 306, 307, 318, 402 and 404 of this Act, the discharge of any pollutant by any person shall be unlawful."

(b) Section 301(b) of the Act requires the achievement by not later than July 1, 1977, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of the Act. Section 301(b) also requires the achievement by not later than July 1, 1983, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of the best available technology economically achievable which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b)(2) of the Act.

(c) Section 306 of the Act requires the achievement by new sources of a Federal standard of performance providing for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

(d) Section 304(b) of the Act requires the Administrator to publish regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the application of the best practicable control technology currently available and the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods and other alternatives.

(e) Section 306(b)(1)(B) of the Act requires the Administrator, after a category of sources is includes in a list published pursuant to section 306(b)(1)(A) of the Act, to propose regulations establishing Federal standards of performances for new sources within such category. Standards of performance are to provide for the control of the discharge of pollutants which reflect the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable a standard permitting no discharge of pollutants.

(f) Section 307(c) of the Act provides that the Administrator shall promulgate pretreatment standards for sources which would be "new sources" under section 306 (if they were to discharge pollutants directly to navigable waters) at the same time standards of performance for the equivalent category of new sources are promulgated.

(g) Section 402(a)(1) of the Act provides that the Administrator may issue permits for the discharge of any pollutant upon condition that such discharge will meet all applicable requirements under sections 301, 302, 306, 307, and 403 of this Act. In addition, section 402(b)(1)(A) of the Act requires that permits issued by States under the National Pollutant Discharge Elimination System ("NPDES") established by the Act must insure compliance with any applicable requirements of sections 301, 302, 306, 307 and 403 of the Act.

§ 401.13 Test procedures for measurement.

The test procedures for measurement which are prescribed in Part 130, 40 CFR shall apply to expressions of pollutant amounts, characteristics or properties in effluent limitations guidelines and standards of performance set forth in Parts 402 through 699, 40 CFR, unless otherwise specifically noted.

Part 426 is proposed to read as follows:

PART 426—EFFLUENT LIMITATIONS GUIDELINES FOR EXISTING SOURCES AND STANDARDS OF PERFORMANCE AND PRETREATMENT STANDARDS FOR NEW SOURCES FOR THE GLASS MANUFACTURING SOURCE CATEGORY

Subpart A—Insulation Fiberglass Subcategory

Sec.

426.10 Applicability; Description of insulation fiberglass manufacturing subcategory.
426.11 Special definitions.
426.12 Effluent limitations guidelines representing the degree of effluent reduction obtainable by the application of the practicable control technology currently available.
426.13 Effluent limitations guidelines representing the degree of effluent reduction obtainable by the application of the best available technology economically achievable.
426.14 Standards of performance for new sources.
426.15 Pretreatment standards for new sources.

Subpart A—Insulation Fiberglass Subcategory

§ 426.10 Applicability; description of insulation fiberglass manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process in which molten glass is either directly or indirectly made, continuously fiberized and chemically bonded with phenolic resins into a wool-like material.

§ 426.11 Specialized definitions.

For the purposes of this Subpart:

(a) The term "process waste water" shall mean (1) any water which comes into contact with any glass, fiberglass, phenolic binder solution, or any other raw material, intermediate or final material or product used in, or resulting from, the manufacture of insulation fiberglass and (2) non-contact cooling water.

(b) The term "process waste water pollutants" shall mean pollutants contained in process waste waters.

§ 426.12 Effluent limitations guidelines representing the degree of effluent reduction obtainable by the application of the best practicable control technology currently available.

(a) The effluent limitation representing the degree of effluent reduction obtainable by the application of the best practicable control technology currently available is no discharge of process waste water pollutants.

(b) Application of the factors listed in section 304(b)(1)(B) does not require variation from the effluent limitation set forth in this section for any point source subject to such effluent limitation.

§ 426.13 Effluent limitations guidelines representing the degree of effluent reduction obtainable by the application of the best available technology economically achievable.

(a) The effluent limitation representing the degree of effluent reduction obtainable by the application of the best available technology economically achievable is no discharge of process waste water pollutants.

(b) Application of the factors listed in section 304(b)(2)(B) does not require variation from the effluent limitation set forth in this section for any point source subject to such effluent limitation.

§ 426.14 Standards of performance for new sources.

(a) The standard of performance representing the degree of effluent reduction obtainable by the application of the best available demonstrated control technology, processes, operating methods, or other alternatives is no discharge of process waste water pollutants.

(b) Application of the factors listed in Section 306 does not require variation from the standard of performance set forth in this section for any point source subject to such standard of performance.

§ 426.15 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the insulation fiberglass manufacturing subcategory which is an industrial user of a publicly owned treatment works, (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to navigable waters), shall be the standard set forth in Part 128, 40 CFR, except that for the purposes of this section, 128.133, 40 CFR shall be amended to read as follows: "In addition to the prohibitions set forth in section 128.131, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 426.14, 40 CFR Part 426; provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant."

[FR Doc.73-17414 Filed 8-21-73;8:45 am]

[40 CFR Part 409]

SUGAR PROCESSING CATEGORY; BEET SUGAR PROCESSING SUBCATEGORY

Proposed Effluent Limitations Guidelines for Existing Sources and Standards of Performance and Pretreatment Standards for New Sources

Notice is hereby given that effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources set forth in tentative form below are proposed by the Environmental Protection Agency ("EPA") for the beet sugar processing subcategory of the sugar processing category pursuant to sections 304(b), 306(b) and 307(c) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1314, 1316(b) and 1317(c), 86 Stat. 816 et seq.; P.L. 92-500) (the "Act").

a. Legal authority. 1. Existing point sources. Section 301(b) of the Act requires the achievement by not later than July 1, 1977, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of the Act. Section 301(b) also requires the achievement by not later than July 1, 1983, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of best available technology economically achievable which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b) to the Act.

Section 304(b) of the Act requires the Administrator to publish regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the application of the best practicable control technology currently available and the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedure innovations, operating methods and other alternatives. The regulations proposed herein set forth effluent limitations guidelines, pursuant to section 304(b) of the Act, for the beet sugar processing category.

2. *New sources.* Section 306 of the Act requires the achievement by new sources of a Federal standard of performance providing for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable, a standard permitting no discharge of pollutants.

Section 306(b)(1)(A) of the Act requires the Administrator to propose regulations establishing Federal standards of performances for categories of new sources included in a list published pursuant to section 306(b)(1)(A) of the Act. The Administrator published in the FEDERAL REGISTER of January 16, 1973 (38 FR 1624) a list of 27 source categories, including the sugar processing category. The regulations proposed herein set forth the standards of performance applicable to new sources within the beet sugar processing subcategory of the sugar processing category.

Section 307(c) of the Act requires the Administrator to promulgate pretreatment standards for new sources at the same time that standards of performance for new sources are promulgated pursuant to section 306. Section 409.15 proposed below provides pretreatment standards for new sources within the beet sugar processing subcategory of the sugar processing category.

Section 304(c) of the Act requires the Administrator to issue to the States and appropriate water pollution control agencies information on the processes, procedures or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under section 306 of the Act. The report referred to below provides, pursuant to section 304(c) of the Act, preliminary information on such processes, procedures or operating methods.

b. *Summary and Basis of Proposed Effluent Limitations Guidelines, Standards of Performance and Pretreatment Standards for New Sources.* 1. *General methodology.* The effluent limitations guidelines and standards of performance proposed herein were developed in the following manner. The point source category was first studied for the purpose of determining whether separate limitations and standards are appropriate for different segments within the category. This analysis included a determination of whether differences in raw material used, product produced, manufacturing process employed, age, size, waste water constituents and other factors require development of separate limitations and standards for different segments of the point source category. The raw waste characteristics for each such segment were then identified. This included an analysis of (1) the source, flow and volume of water used in the process employed and the sources of waste and waste waters in the plant; and (2) the constituents of all waste water. The constituents of the waste waters which should be subject to effluent limitations guidelines and standards of performance were identified.

Next, the control and treatment technologies existing within each segment were identified. This included an identification of each distinct control and treatment technology, including both in-plant and end-of-process technologies, which are existent or capable of being designed for each segment. It also included an identification of, in terms of the amount of constituents and the chemical, physical, and biological characteristics of pollutants, the effluent level resulting from the application of each of the technologies. The problem, limitations and reliability of each treatment and control technology were also identified. In addition, the nonwater quality environmental impact, such as the effects of the application of such technologies upon other pollution problems, including air, solid waste, noise and radiation were identified. The energy requirements of each control and treatment technology were determined as well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology constitute the "best practicable control technology currently available," "best available technology economically achievable" and the "best available demonstrated control technology, processes, operating methods, or other alternatives." In identifying such technologies, various factors were considered. These included the total cost of application of technology in relation to the effluent reduction benefits to be achieved, from such

application, the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors.

The data on which the above analysis was performed included EPA permit applications, EPA sampling and inspections, consultant reports, and industry submissions.

The pretreatment standards proposed herein are intended to be complementary to the pretreatment standard proposed for existing sources under Part 128 of 40 CFR. The basis for such standards are set forth in the FEDERAL REGISTER of July 19, 1973, 38 FR 19236. The provisions of Part 128 are equally applicable to sources which would constitute "new sources" under section 306 if they were to discharge pollutants directly to navigable waters except for section 128.133. That section provides a pretreatment standard for "incompatible pollutants" which requires application of the "best practicable control technology currently available," subject to an adjustment for amounts of pollutants removed by the publicly owned treatment works. Since the pretreatment standards proposed herein apply to new sources, Section 409.15 below amends § 128.133 to require application of the standard of performance for new sources rather than the "best practicable" standard applicable to existing sources under sections 301 and 304(b) of the Act.

(2) Summary of conclusions with respect to beet sugar processing subcategory of the sugar processing category.

The beet sugar processing segment of the sugar processing industry serves as a single subcategory for the purpose of establishing effluent limitations guidelines and standards of performance. Factors such as age, size of plant, process employed, waste water constituents and waste control technologies substantiate this determination.

The known significant pollutant properties or constituents of waste water resulting from beet sugar processing include biochemical oxygen demand, chemical oxygen demand, suspended solids, dissolved solids, coliform bacteria, ammonia, pH and heat.

The control and treatment technologies which are available include in-plant control measures and techniques and end-of-process treatment techniques. In-plant control measures include minimization of the intake of water by reuse of the waste waters in the process. The principal treatment methods include screening to remove solid material, coagulation, and sedimentation with ultimate disposal of excess waste water in holding ponds, waste stabilization lagoons, or by irrigation.

The three major sources of waste water resulting from beet sugar processing plants include lime mud slurry, flume (beet transport) water, and barometric condenser water. Lime mud slurry resulting from the clarification of impure sugar solutions is disposed of without discharge to navigable water by all plants in the beet sugar processing subcategory. A total pollutant reduction of 28.6 kg BOD5/kkg refined sugar (28.6 lb BOD5/1000 lb) results. Flume (beet transport) water originates from beet fluming, washing, and miscellaneous plant uses. A total of 44 plants presently employ extensive recycling of flume waters, 6 employ partial recycling, and 2 employ no recycling of flume (beet transport) waters. Thirty-two plants presently accomplish no discharge of flume (beet transport) waters with excess waste water discharged to navigable waters. All beet sugar processing plants presently practice, have planned, or propose extensive recycling of flume (beet transport) waters with land disposal of the excess waste water within several years. Cumulative pollutant reduction by no discharge of lime mud slurry and flume (beet transport) water is 48.48 kg BOD5/kkg refined sugar (48.48 lb BOD/5 1000 lb) (a cumulative reduction of 94 percent of BOD5). Barometric condenser water results from the process of evaporation and crystallization of sugar solution at reduced temperature. A total of 16 plants employ recycling and reuse of barometric condenser water, and 19 employ partial recycling and reuse of barometric condenser waters.

Complete land disposal of all excess process waste water without discharge to navigable waters is practiced at 11 beet sugar processing plants. Partial land disposal of condenser water is accomplished by a total of 22 plants with excess waste water discharged to navigable waters. Thirty-two of the 52 plants employ cooling devices for cooling of barometric condenser water either prior to reuse, land disposal, or discharge to navigable waters. Cumulative pollutant reduction by zero discharge of lime mud slury, flume (beet transport) water, and barometric condenser water is 50.6 kg BOD^5 kkg refined sugar (50.6 lbs. BOD^5 1000 lb). Other treatment methods such as trickling filters and activated sludge processes have been used with limited success. Substantial reductions of pollutants may be achieved through use of these conventional treatment processes (approaching 0.25 kg BOD^5 1000 lb (0.5 lbs BOD^5 ton of beets sliced)). However, the successful application of these processes has been limited by the seasonal nature of the beet sugar processing industry and the high cost of treating short-term large waste volumes.

The following table sets forth the total estimated capital costs required by an average-sized 3265 kkg of beets sliced/day (3600 tons/day) beet sugar processing plant to achieve from 55 percent to 100 percent reduction of BOD^5 utilizing in the order set forth below, (i) land disposal of lime mud slurry, (ii) extensive recycling of flume water with land disposal of excess waste water and (iii) extensive recycling of barometric condenser water with land disposal of excess waste water.

Cumulative percent Reduction of total waste Source load (BOD_5)	Cumulative estimated Capital costs.
Lime mud slurry 55	$50,000.
Flume water (beet transport) 94	$278,000–$360,000.
Condenser water 100	$454,000–$360,000.

The cost figures given above were derived from actual cost data on existing plants and other cost estimates for equipment, facilities, piping, and other related items associated with pollution control measures. The cost figures for the average-sized plant presume no inplace pollution control measures presently existing within the beet sugar processing subcategory. The range of cost results from investigation of alernative measures of pollution control for the identified waste sources. Percent reduction of BOD^5 indicates the cumulative percent of waste load reduction relative to the total potential BOD^5 load from beet sugar processing. Based on existing inplace plant facilities, increased capital cost to achieve zero discharge of beet sugar processing wastes is estimated at 06. to 1.0 percent of present capital investment. The average-sized beet sugar processing plant is estimated to incur an increased capital investment of $176,000 to $298,000. These cost figures are based upon availability of suitable land under ownership of the plant, its representatives or its agents, and adjacent to the plant site. If it is necessary to purchase land, and/or transport waste waters to suitable land not adjacent to the plant site, an average-sized beet sugar processing plant under these circumstances may incur an increased capital cost of up to $460,000. Due to the land based control technology for reaching zero discharge to navigable water, suitable land area must be available for waste water disposal as described by the equation given in § 409.11 in Subpart A of Part 409.

Processing sugar beets to refined sugar normally requires 4320 kilowatts (5800 horsepower) for the average-sized plant with no pollution control practices or about 1.2 kilowatts per kkg (1.61 horsepower per ton) of beets sliced per day. The added power requirements for pollution control without discharge to navigable waters approximate 748 kilowatts (1000 horsepower) which is equally divided between recycle of flume waters and condenser waters. Pollution control thus would consume about 15 percent of the total electrical power usage of a non-polluting beet sugar refining operation.

Removal of solid material from incoming beets in the flume (beet transport) system contributes large amounts of solid waste which must be disposed of at the plant site. The majority of the present beet sugar processing plants retain the solid material in earthen holding ponds with or without periodic removal and

placement on adjacent land. Solids removal and disposal is an integral part of a flume water recycling system.

Air pollution aspects of importance in beet sugar processing include those attributable to suspended particulate matter, sulfur oxide and odor. Odor originates primarily from waste holding ponds. It may be controlled by utilization of shallow pond depths, screening of waste before discharge to solids settling devices, use of aerators on pond surfaces, and bacterial cultures. Odor control in flume water recycling systems can be achieved by maintaining alkaline conditions (pH above 8.0) in the recirculation system. Mechanical devices are available to satisfactorily limit suspended particulate matter resulting from beet sugar processing. Particulate matter results primarily in emissions from pulp driers and steam boilers. Sulfur dioxide emissions may result from burning of high sulfur containing fuel oils and coal in boilers.

The principal nonwater quality environmental impact resulting from proposed water related pollution control technology recommended herein are odors and solids (primarily soil particles) associated with flume (beet transport) water recirculation. Fogging may occur as a result of evaporative water losses in cooling towers and other cooling devices employed in condenser water recirculation systems. Increased requirements for solids removal in flume (beet transport) water recycling systems, and cooling devices in condenser water recycling systems increase the potential impact of solids disposal and fogging.

The degree of effluent reduction attainable through the application of the best practicable control technology currently available for the beet sugar processing subcategory has been determined to be no discharge of process waste water pollutants to navigable waters. It can be accomplished through maximum in-plant water reuse and recycle, and controlled land disposal of excess waste water. At present, 11 of 52 beet sugar processing plants accomplish no discharge of process waste water pollutants to navigable waters through in-plant water reuse and land disposal procedures. In addition, the majority of the industry through treatment, recycling and land disposal presently handles flume (beet transport) water without discharge to navigable waters. The technology is currently available and demonstrated to be reliable and effective in achieving no discharge of process waste water pollutants to navigable waters. The best practicable control technology currently available for the subcategory on which the degree of effluent reduction was determined is: (1) Recycling of flume waters with land retention of excess waste waters including the specific features of screening; suspended solids removal and control in the recycling system; pH control for minimization of odors, bacterial populations, foaming, and corrosive effects; (2) recycling of condenser water using cooling devices for condenser or other in-plant uses; (3) containment of lime mud slurry or reuse in the plant process; (4) reduction of moisture in the lime mud cake conveyance or transport with minimum quantities of water added in slurrying; (5) return of pulp press water to the diffuser; (6) use of continuous diffusers in beet processing; (7) use of pulp driers in beet processing; (8) concentration of Steffen waste for disposal on beet pulp, use for reclamation purposes or spreading of unconcentrated Steffen waste in thin layers on land excluded from surface runoff (such as earthen holding ponds); (9) dry conveyance of beet pulp from diffusers to pulp driers; and, (10) containment of all general wastes, e.g., floor and equipment washes, filter cloth washes, and other miscellaneous waste waters by discharge to flume water systems or containment in earthen holding ponds without discharge to navigable waters.

The effluent limitation of no discharge of process waste water pollutants to navigable waters is based upon the availability of suitable land for controlled filtration of the excess process waste water. If suitable land is not available for controlled filtration, the effluent limitation may be varied to allow the discharge of barometric condenser water derived from sugar concentration. The availability of suitable land is determined by application of the formula given in § 409.11 of Subpart B of Part 409 hereof. The application of the formula considers variable factors such as soil filtration rate, capacity of production plant, and length of production period for determining land availability. Barometric condenser waters are relatively unpolluted, containing only BOD5, pH and heat as significant pollutants. Properties and constituents of such wastes are readily separable from the other two major sources of waste water discharged from a beet sugar processing plant.

The effluent reduction attainable through the application of the best available technology economically achievable is no discharge of process waste water pollutants to navigable waters without variance. Factors by which the effluent limitation may be varied are no longer applicable due to the extended time period available for obtaining the land resources with which to meet the requirement of no discharge of process waste water pollutants to navigable waters.

The standard of performance for new sources representing the degree of effluent reduction obtainable through the application of the best available demonstrated control technology has been determined to be no discharge of process waste water pollutants to navigable waters. An allowance for a variation of the standard is not needed since land availability requirements should be considered in site selection for a new point source.

A report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the beet sugar Processing Segment of the Sugar Processing Point Source Category" which details the analysis undertaken in support of the regulations being proposed herein is available for inspection in the EPA Information Center, Room 227, West Tower, Waterside Mall, Washington, D.C., at all EPA regional offices, and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the proposed regulations is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed regulations, or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman.

c. *Summary of public participation.* Prior to this publication, the agencies and groups listed below were consulted and given an opportunity to participate in the development of the effluent limitations guidelines and standards of performance for the beet sugar processing subcategory. The following are the principal agencies and groups consulted: (1) Effluent Standards and Water Quality Information Advisory Committee (established under Section 515 of the Act); (2) all State and U.S. Territory Pollution Control Agencies; (3) Ohio River Valley Sanitation Commission; (4) New England Interstate Water Pollution Control Commission; (5) Delaware River Basin Commission; (6) Hudson River Sloop Restoration, Inc.; (7) Conservation Foundation; (8) American Crystal Sugar Company; (9) American Sugar Company; (10) Beet Sugar Development Foundation; (11) Businessmen for the Public Interest; (12) Environmental Defense Fund, Inc.; (13) Natural Resources Defense Council; (14) The American Society of Civil Engineers; (15) Water Pollution Control Federation; (16) National Wildlife Federation; (17) The American Society of Mechanical Engineers; (18) U.S. Department of Health, Education, and Welfare; (19) U.S. Department of Commerce; (20) U.S. Department of Agriculture; (21) Water Resources Council; (22) U.S. Department of the Interior; (23) Great Western Sugar Company; (24) U.S. Beet Sugar Association; and (25) Utah-Idaho Sugar Company;

The primary issues raised in the development of these proposed effluent limitations guidelines and standards of performance and the treatment of these issues herein are as follows. Public comments on all these suggestions are solicited.

1. Industry, states, other Federal agencies, and the Effluent Standards and Water Quality Information Advisory Committee questioned the ability to accomplish no discharge of process waste

water pollutants to navigable waters where soil filtration rates, land availability, climatic conditions, age of facilities, and location are less favorable to controlled land disposal of waste waters. All such factors have been considered in establishment of the proposed levels of technology, effluent limitation guidelines and standards of performance. Land availability is a problem in urban areas, particularly where soil and climatic conditions are less favorable to land disposal of waste waters. EPA has determined that it is not practicable to require no discharge of process waste water pollutants where suitable land is not available adjacent to the point source and presently under the ownership of the point source discharger. Therefore, § 409.12 provides that where suitable land is not available, the best practicable control technology currently available (to be achieved by 1977) results in a maximum discharge of 3.3 kg BOD5/kkg (3.3 lb/1000 lb) of refined sugar, rather than no discharge. The no discharge requirement is, however, to be achieved by all plants by July 1, 1983.

It has been suggested that seepage rates could replace land availability as the criterion for allowing a reduction in the degree of treatment being required. Such a provision would change the economic impact and degree of waste disposal, raising it for those plants without available land in areas of high seepage rates and lowering it for plants in low seepage rate areas. The net effect is likely to be a higher degree of waste disposal at the cost of higher economic impact. In addition, there may also be alternative ways of reducing economic impact in areas with low seepage, through increased use of recycling.

It has also been suggested that the size of plants be used as a criterion for requiring complete elimination of waste, either by itself or in combination with seepage rate or land availability. Since very small plants have not achieved complete elimination of waste it may be more consistent with industry practice not to require them to achieve no discharge. In combination with one of the land criteria, segmentation by size could be used to modify the tradeoffs between economic impact and degree of waste disposal. On the other hand, some small plants have the capability to meet a no discharge requirement while others may already be exempt from doing so because of lack of available land. In considering these alternative criteria, it was concluded that land availability would serve as a reasonable surrogate for reducing economic impact.

2. Industry felt that the cost data for pollution control reduction given in Section VIII of the Report is underestimated and stems from lack of inclusion of land costs and underestimation of required waste water blowdown volume from a recirculating waste water system. The cost data utilized in the cost-effectiveness variations of alternative treatment and control technologies are outlined in Section VIII of the Report and are based on actual data supplied by the industry and verified for specific technological features at operational beet sugar processing plants visited by EPA personnel.

3. Industry, states and the Effluent Standards and Water Quality Information Advisory Committee were concerned that water rights in some Western states may present possible conflicts with the limitation of no discharge of process waste water pollutants to navigable waters. To the extent any conflict is presented with the prior appropriation doctrine by the reduction in discharge of treated waste effluent, such a conflict would appear to be presented by any such reduction whether or not a reduction is to zero discharge or to some greater permitted discharge. Congress has in the Federal Water Pollution Control Act Amendments of 1972 set as a national goal the elimination of the discharge of pollutants. In addition sections 301, 304 (b) and 306 of the Act provide for the application of effluent limitations and standards which will require the reduction of discharges of pollutants to the maximum extent possible (consistent with the technological and economic factors which are to be taken into consideration). A preliminary evaluation by EPA's Office of General Counsel has concluded that to the extent of a conflict with State laws concerning appropriated water rights, the Federal doctrine of preemption nevertheless requires the application of treatment requirements established under the Act.

4. Industry was concerned about odors emanating from prolonged storage of beet sugar processing waste waters with related nuisance problems. Various mechanisms are available and are practiced within the industry for minimizing odor problems. Significant reduction in odors at beet sugar processing plants can be accomplished through dry-lime cake handling and disposal and other measures as described in section VII of the Report.

5. States felt that additional attention needed to be given to prevention of possible ground water pollution from controlled land disposal of waste waters. Contamination of underlying aquifers can best be prevented through proper disposal site selection, waste water management practices, and application of ground water hydrologic and geologic factors. The soil media is in itself an effective and reliable means for reduction of waste water pollutant levels. A detailed discussion of the role of soil as a waste water disposal medium is included within Section VII of the Report. With widespread use of land disposal of beet sugar processing waste waters, no serious ground water pollution problems are known to have resulted from or can be attributed to these land disposal practices. Responsibility for maintaining ground water quality lies primarily with the States. State authority may be used to prevent contamination where it appapers to be a problem by controlling pond location and requiring sealing as necessary.

6. States were concerned that fogging resulting from evaporative cooling of barometric condenser waters may present a visibility problem at some locations. Fogging problems are subject to control. Also, there are only one or two locations in the industry where this problem may occur. A more detailed discussion of possible alternatives for fogging control is given in section VIII of the Report.

7. The Effluent Standards and Water Quality Information Advisory Committee felt that total dissolved solids content in recirculated waste water (flume and barometric condenser water) is of pollutional concern in land disposal of these waste waters. Total dissolved solids pose some largely aesthetic problems for human consumptive purposes, require treatment for removal for some industrial water supply purposes, and present deleterious effects on irrigation of some crops at high concentration levels. No economic method exists for removal of dissolved solids on a large scale basis. A detailed discussion of the origin, effects, and control of total dissolved solids in beet sugar processing waste waters is given in section IX of the Report.

Interested persons may participate in this rulemaking by submitting written comments to the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Philip B. Wisman. Comments on all aspects of the proposed regulations are solicited. All comments received not later than September 21, 1973 will be considered.

Dated August 15, 1973.

JOHN QUARLES,
Acting Administrator.

PART 409—EFFLUENT LIMITATIONS GUIDELINES FOR EXISTING SOURCES AND STANDARDS OF PERFORMANCE AND PRETREATMENT STANDARDS FOR NEW SOURCES FOR THE SUGAR PROCESSING CATEGORY

Subpart A—Beet Sugar Processing Subcategory

Sec.

409.10 Applicability; description of beet sugar processing subcategory.
409.11 Special definitions.
409.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
409.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
409.14 Standards of performance for new sources.
409.15 Pretreatment standards for new sources.

Subpart A—Beet Sugar Processing Subcategory

§ 409.10 Applicability; description of beet sugar processing subcategory.

The provisions of this subpart are applicable to any operation existing for the primary purpose of processing of sugar

beets for the production of refined sugar for commercial or domestic use.

§ 409.11 Specialized definitions.

For the purposes of this Subpart:

(a) The term "process waste water" shall mean (1) all water used in or resulting from the processing of sugar beets to refined sugar, including process water, barometric condenser water, beet transport or flume water and (2) all other liquid wastes including cooling waters.

(b) The term "process waste water pollutants" shall mean pollutants contained in process waste waters.

(c) The term "availability of suitable land" shall mean that amount of land which is (1) adjacent to the point source and (2) under the ownership or control of the owner or operator of the point source as determined by the formula set forth below. The amount of land is determined by the application of the following formula:

$A=0.001426(CL/s)+0.0536C$ (for metric system units) where A=land area requirements for controlled waste water disposal expressed in hectares, C=processing rate of capacity of plant in metric tons of refined sugar production per day, L=length of sugar production per campaign of plant (including extended use campaign) expressed in terms of days, s=actual soil filtration rate for waste water to be applied to land expressed in terms of centimeters per day, not to exceed 0.635 centimeters per day.

$A=0.000631(CL/S)+0.0601C$ (for English system units) where A=land area requirements for controlled waste water disposal expressed in terms of acres, C=processing rate or capacity of plants in tons of refined sugar production per day, L=length of sugar production campaign of plant (including extended use campaign) in terms of total number of days, s=actual soil filtration rate for waste water to be disposed of on land expressed in terms of inches per day, not to exceed ¼ inch per day.

(d) For the purposes of this subpart, the following abbreviations shall have the following meaning: (1) kg shall mean kilogram(s); (2) kkg shall mean 1000 kilograms; and, (3) lb shall mean pound(s).

§ 409.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) The effluent limitation representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available is no discharge of process waste water pollutants to navigable waters.

(b) The effluent limitation of no discharge of process waste water pollutants to navigable waters is based upon the availability of suitable land for controlled filtration of the excess process waste waters. If suitable land is not available for controlled filtration, the effluent limitation may be varied to allow the discharge of barometric condenser water derived from sugar evaporation and crystallization within the effluent limitations set forth in the following table:

Effluent Characteristics	*Limitation*
BOD5	Maximum for any one day 3.3 kg/kkg refined sugar (3.3 lb/1000 lb) Maximum average of daily values for any period of 30 consecutive days 2.2 kg/kkg refined sugar (2.2 lb/1000 lb)
Temperature [1]	6.0 to 9.0 units
pH.	

[1] No discharge of heat from waste waters to navigable waters at a temperature greater than the temperature of cooled water returned to the heat producing process.

§ 409.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) The effluent limitation representing the degree of effluent reduction obtainable by the application of the best available technology economically achievable is no discharge of process waste water pollutants to navigable waters.

(b) Application of the factors listed in section 304(b)(2)(b) does not require variation from the effluent limitation set forth in this section for any point source subject to such effluent limitation.

§ 409.14 Standards of performance for new sources.

(a) The standard of performance representing the degree of effluent reduction obtainable by the application of the best available demonstrated control technology, processes, operating methods, or other alternatives is no discharge of process waste water pollutants to navigable waters.

(b) Application of the factors listed in section 306 does not require variation from the standard of performance set forth in this section for any point source subject to such standard of performance.

§ 409.15 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act, for a source within the beet sugar processing subcategory which is an industrial user of a publicly owned treatment works, (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to navigable waters), shall be the standard set forth in Part 128, 40 CFR, except that for the purposes of this section, § 128.131 40 CFR shall read as follows: "In addition to the prohibitions set forth in § 128.131 of this title, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works by a major contributing industry shall be the standard of performance for new sources specified in § 409.14, 40 CFR, Part 409; provided that, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall be correspondingly reduced for that pollutant."

[FR Doc.73-17415 Filed 8-21-73;8:45 am]

Just Released

CODE OF FEDERAL REGULATIONS

(Revised as of July 1, 1973)

Title 32—National Defense (Parts 400–589)---------- $4.50

Title 32—National Defense (Parts 1400–1599)---------- 3.25

Title 37—Patents, Trademarks, and Copyrights---------- 1.75

[A Cumulative checklist of CFR issuances for 1973 appears in the first issue of the Federal Register each month under Title 1]

**Order from Superintendent of Documents,
United States Government Printing Office,
Washington, D.C. 20402**